U.S. Army Corps of Engineers Correspondence

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, ALASKA
P.O. BOX 898
ANCHORAGE, ALASKA 99506-0898

REPLY TO ATTENTION OF:

Regulatory Branch
East Section

FEBRUARY 19 1999

RECEIVED
FEB 22 1999
Stwd. Design & Eng. Svc
Director's Office

Michael L. Downing, P.E.
Director
Statewide Design & Engineering
Services Division
Alaska Department of Transportation
and Public Facilities
3132 Channel Drive
Juneau, Alaska 99801-7898

Dear Mr. Downing:

This is in regard to your letter, dated January 25, 1999, pertaining to the proposed Environmental Impact Statement (EIS) to be prepared for the Ketchikan-Gravina Island Bridge project. Your letter included an invitation to the Regulatory Branch, U.S. Army Corps of Engineers, Alaska District, to participate in the EIS preparation as a Cooperating Agency.

Please note that pursuant to 49 U.S.C. 1155g(6)(A), the construction of a bridge structure over navigable waters is under the authority of the U.S. Coast Guard. Also, a Department of the Army nationwide permit (NWP) has been issued pursuant to December 13, 1996, Federal Register, Final Notice of Issuance, Reissuance, and Modification of Nationwide Permits (61 FR 65874), which authorizes:

> (15.) U.S. Coast Guard Approved Bridges. Discharges of dredged or fill material incidental to the construction of bridges across navigable waters of the United States, including cofferdams, abutments, foundation seals, piers, and temporary construction and access fills provided such discharges have been authorized by the U.S. Coast Guard as part of the bridge permit. Causeways and approach fills are not included in this NWP and will require an individual or regional Section 404 permit. (Section 404)

We anticipate that most bridge-related fills will be covered by one or more of the NWPs.

However, should it be determined that either a fill approach(s) and/or causeway(s) would be constructed in navigable waters of the U.S., in conjunction with the bridge project, the DA, in accordance with the National Environmental Policy Act regulations and our implementing regulations (33 CFR Part 325, Appendix B), would then consent to be a Cooperating Agency.

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, ALASKA
P.O. BOX 898
ANCHORAGE, ALASKA 99506-0898

REPLY TO
ATTENTION OF:

FEBRUARY 28 2000

Regulatory Branch
East Section
9-000152

Mr. Al Steininger, P.E.
Alaska Department of Transportation
and Public Facilities
6860 Glacier highway
Juneau, Alaska 99801-7999

Dear Mr. Steininger:

Your request of February 7, 2000, for concurrence with the statement of purpose and need to be included in the National Environmental Policy Act (NEPA) document for the Gravina Access project in Ketchikan, Alaska has been received. This project has been assigned number 9-000152, Tongass Narrows 524, which should be referred to in all future correspondence with this office. Enclosed is the Interagency Working Agreement Concurrence Form indicating The Corps of Engineers' concurrence with the purpose and need statement for this project.

We appreciate your cooperation with the Corps of Engineers' Regulatory Program. Please refer to file number 9-000152, Tongass Narrows 524, in future correspondence or it you have any questions concerning this letter. If you have any questions, please contact me at the above address, at (907) 753-2720, or toll free in Alaska at (800) 478-2712.

Sincerely,

Steve Duncan
Project Manager

Enclosure

File Copy 07072 - 144
~~4.2.1~~ 7.1.1.1
File Topic 1 ☐
File Topic 2 ☐
File Topic 3 ☐
File Topic 4 ☐
File Topic 5 ☐
Chron # _____

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

DESIGN & ENGINEERING SERVICES DIVISION
SOUTHEAST REGION - DESIGN

TONY KNOWLES, GOVERNOR

6860 GLACIER HIGHWAY
JUNEAU, ALASKA 99801-7999
PHONE: (907) 465-4428
TEXT: (907) 465-4647
FAX: (907) 465-4414

October 5, 1999

File Copy 07072 - 144

File Topic 1 4.1.2
File Topic 2
File Topic 3
File Topic 4
File Topic 5
Chron #

Mr. Tim Jennings
Unit Supervisor
U. S. Army Corps of Engineers
Regulatory Branch
P. O. Box 898
Anchorage, AK 99506

RE: Gravina Access Project

Dear Mr. Jennings:

We would like to provide you with additional background information on the Gravina Access Project. Unlike the 1994 State-funded Tongass Narrows Crossing Draft Environmental Impact Statement (EIS), the Gravina Access Project is a federally funded project. The Federal Highway Administration is the lead federal agency. The project scope is broader than the 1994 EIS in which improved access to the airport was the sole purpose. The purpose and need of the Gravina Access Project includes access to the airport as well as developable lands on Gravina. This expanded purpose considers the need to provide improved access to Gravina Island for economic development as well as access to recreational lands.

The attached figure shows the project area, previous proposed crossings concepts, and related road links to the airport. At this point, no alternatives have been proposed. Using previous work as a guide, improved access to Gravina Island will likely require some degree of construction of access roads. Should a build alternative result from the current environmental analysis, the road alignments and number of road miles will be determined by which alternative is selected.

As you are aware the Gravina Access Project is being developed in accordance with the Interagency Working Agreement to integrate the Section 404(b)(1) guidelines and other 404 related permitting and certification requirements for compliance with NEPA. The merged process fosters interagency coordination, communication, and cooperation. We look forward to working with you on this project.

If you have any questions or need additional information, please feel free to call me or Mark Dalton, HDR Alaska, Inc. project manager, at 1 (888)-520-4886.

Sincerely,

Al Steininger, P.E.
Project Manager

Attachment: Project map

cc: Mark Dalton, HDR Alaska, Inc.
Steve Duncan, U.S. Army Corps of Engineers

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

STATEWIDE DESIGN & ENGINEERING SERVICES
STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION

FRANK H. MURKOWSKI, GOVERNOR

6860 GLACIER HIGHWAY
JUNEAU, ALASKA 99801-7999
PHONE (907) 465-1774
TEXT: (907) 465-4647
FAX: (907) 465-2016

June 13, 2003

Re: Gravina Access
Project No. 67698

Glen Justis, Section Chief
U.S. Army Corps of Engineers
Regulatory Branch
East Section
P.O. Box 6898
Elmendorf AFB, AK 99506-6898

Dear Mr. Justis,

Enclosed is the Preliminary Draft Environmental Impact Statement for the Gravina Access project. The Alaska Department of Transportation and Public Facilities is distributing the preliminary draft to Cooperating Agencies for review and comment at this time. Our intention is to evaluate comments from Cooperating Agencies, make changes to the document if necessary, and include comments and a response in the draft document released to the public no later than August 4, 2003.

On January 25, 1999, the Alaska Department of Transportation and Public Facilities invited your agency to participate as a Cooperating Agency. The February 19,1999 response by Larry Reeder, Regulatory Branch Chief, declined on the basis that bridge construction would fall under the authority of the U. S. Coast Guard, and bridge related fills would probably be covered by Nationwide Permits. The project has evolved to include road elements in wetlands as well as ferry alternatives with Section 404 and Section 10 impacts. Based on these changes Larry Reeder agreed the Army Corps of Engineers would be a Cooperating Agency.

Please submit your comments by July 14, 2003. Contact me at 465-1774 if you have any questions. Thank you.

Sincerely,

Reuben Yost
Special Projects Manager

Kristen K
Denny D
Mark D

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, ALASKA
P.O. BOX 898
ANCHORAGE, ALASKA 99506-0898

REPLY TO
ATTENTION OF:

APRIL 15 2002

RECEIVED
APR 17 2002

Regulatory Branch
East Section
D-2000-0152

Ms. Kristen Maines
HDR Alaska
2525 C Street
Anchorage, Alaska 99503

Dear Ms. Maines:

This is in response to your April 8, 2002, application on behalf of the Alaska Department of Transportation to conduct limited on-site subsurface exploratory drilling and sampling at eight locations. The project is located in section 15, T. 75S., R. 90E., and sections 31 & 32, T. 75S., R. 91E., Copper River Meridian; in Ketchikan, Alaska.

Department of the Army permit authorization is necessary because your project would involve work in and/or placement of dredged and/or fill material into waters of the U.S. under our regulatory jurisdiction.

Based upon the information and plans you provided, we are hereby verifying that the work described above which would be performed in accordance with the enclosed plan (sheets 1-9) dated April 2002, may be done under the authority of nationwide permit (NWP) 6, Survey Activities, which is described in Enclosure 1. You must comply with all terms and conditions listed on Enclosure 1, as well as to the special conditions listed below:

1. Your use of the permitted activity must not interfere with the public's right to free navigation on all navigable waters of the United States.
2. You must install and maintain, at your expense, any safety lights and signals prescribed by the United States Coast Guard (USCG), through regulations or otherwise, on your authorized facilities. The USCG may be reached at the following address and telephone number: Commander (oan), 17th Coast Guard District, Post Office Box 3-5000, Juneau, Alaska 99802-1217, (907) 586-7755.

The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

Enclosure

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)			
1. APPLICATION NO. 2002-0152	2. FIELD OFFICE CODE 4/8/02	3. DATE RECEIVED 4/8/02	4. DATE APPLICATION COMPLETED 4/8/02

(ITEMS BELOW TO BE FILLED BY APPLICANT)	
5. APPLICANT'S NAME **Roger Healy, Alaska Department of Transportation and Public Facilities**	8. AUTHORIZED AGENT'S NAME AND TITLE **Mark Dalton, HDR Alaska, Inc**
6. APPLICANT'S ADDRESS **DOT&PF Southeast Region** **6860 Glacier Highway** **Juneau, AK 99801-7999**	9. AGENT'S ADDRESS **HDR Alaska, Inc.** **2525 C Street, Suite 305** **Anchorage, Alaska 99503**
7. APPLICANT'S PHONE NOS. W/AREA CODE **PHONE: (907) 465-1821** **FAX: (907) 465-4414**	10. AGENT'S PHONE NOS. W/AREA CODE **PHONE: (907) 274-2000** **FAX: (907) 274-2022**

11. STATEMENT OF AUTHORIZATION

I hereby authorize, **Mark Dalton of HDR Alaska, Inc.** to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

APPLICANT'S SIGNATURE _____ DATE _____

NAME, LOCATION AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE
Gravina Access Project

13. NAME OF WATERBODY, IF KNOWN	14. PROJECT STREET ADDRESS
Tongass Narrows	**Not Applicable**
15. LOCATION OF PROJECT **Ketchikan, Alaska**	

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN
Subsurface conditions will be explored in two areas, for those alternatives that cross Tongass Narrows near the airport, and alternative F3 located at Pennock Island (see map).

17. DIRECTIONS TO THE SITE
Please see the attached maps.

2002-0152

Pg 1 of 9

April 2002

18. Nature of Activity

The purpose of the Conventional Drilling Program for the Gravina Access Project is to conduct limited onsite (over-water) subsurface explorations for confirming bridge feasibility in the two (2) areas presently deemed most suitable for bridge-crossings, and to subsequently facilitate selecting a preferred crossing. The final boring locations for the Drilling Program will be confirmed/pre-verified, using the results of the Marine Geophysical Survey. The detail of this exploratory program and associated materials testing will be commensurate with the requirements for final bridge design (and will be so used, if appropriately located); however, it is emphasized that this Drilling Program is for preliminary verifications only, to satisfactorily and accurately complete the requirements of Stage I engineering feasibility, rather than for final design purposes (in Stage II).

Subsurface conditions will be explored in two areas, for those alternatives that cross Tongass Narrows near the airport, and alternative F3 located at Pennock Island (please refer to the Proposed Boring Location map attached). A total of eight (maximum) borings are proposed. Two (2) borings, one on each side of the main channel, at the approximate pier locations for the navigation span(s), will be advanced for the alternatives near the airport. Four (4) borings will be advanced at Pennock Island, one on each side of the two channels, at the approximate pier locations for the navigation spans. The seventh and eighth borings are reserved/contingency borings, established for the alternatives near the airport, to be advanced if difficulty arises in establishing one of the original two borings as determined by the onsite geotechnical engineer. The seventh and eighth borings would be located along the airport alternatives alignment.

All eight borings will be advanced in water approximately 50 to 100 feet deep, using a truck-mounted drill rig placed on a landing craft, equipped with four (4) anchors to hold the landing craft in place. The drill rig will be equipped to conduct tricone rotary drilling, wireline rock coring, and conventional soil sampling. It is anticipated that all borings will be advanced 40 to 100 feet or deeper below the mudline, as required to reach firm support soils or rock. The area of potential impact for each boring is approximately 5-feet wide by 20 feet long for an area of impact of 100 square feet.

For each boring, Standard Penetration Test drive samples will be generally taken at 5- to 10-foot intervals in firm soils and 10-foot intervals in weak soils. Continuous wireline coring will be conducted in bedrock. All soil samples will be sealed in airtight containers and transported to the laboratory for testing. Rock cores will be placed in 2-foot long core boxes, labeled, photographed, and transported to the laboratory for selective testing and storage. A few select rock samples may be sealed in wax to preserve their natural moisture content for later evaluation. Soil and rock samples from the borings will be classified according to the Unified Soil Classification and Panama Canal Hardness Classification systems, respectively.

Two 3-man drill crews and two experienced geotechnical engineers/geologists will be present during the drilling, providing for a 24-hour operation utilizing two 12-hour shifts. The 24-hour/day over-water operation minimizes the time the landing craft must be held on location at each drill hole. An experienced geotechnical engineer/geologist will be present throughout the fieldwork to observe the drilling, determine boring depths, collect soil and rock samples, and prepare a descriptive log for each boring.

Approximately 8 days of 24-hour operation, including a limited contingency of 1 day (two shifts) for bad weather, is anticipated to complete the drilling for the Conventional Drilling Program.

During the drilling, a senior-level geotechnical engineer/geologist will use a skiff to access the shorelines in the areas of the alternatives, to conduct a geological reconnaissance to map the geology and rock outcroppings. Samples for laboratory testing may be obtained by hand methods.

19. Project Purpose

The Alaska Department of Transportation and Public Facilities is pursuing alternatives for improving access between Revillagigedo Island and Gravina Island in Southeast Alaska. The Gravina Access Project is one of 16 high priority projects funded in the state under the Federal Transportation Equity Act for the 21st Century and involves examining ways to link Revillagigedo Island (home of Ketchikan, Saxman, and other communities) to

Gravina Island, the location of the Ketchikan International Airport and adjoining lands that offer recreational and development potential. Currently, a small ferry across Tongass Narrows provides the access to Gravina Island and it is dedicated solely to airport use. Access to the remainder of the island from Revillagigedo Island is not available except by watercraft; improved transportation access to Gravina Island would provide better service to the airport and enhance the development potential of the large tracts of land situated on the island.

The purpose of the Conventional Drilling Program is to conduct limited onsite (over-water) subsurface explorations for confirming bridge feasibility in the two (2) areas presently deemed most suitable for bridge-crossings, and to subsequently facilitate selecting a preferred crossing.

USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

Drilling and the discharge of excavated materials not collected for soil testing. This discharge is covered under the Nationwide Permit No. 6.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards

There will be less than 0.75 cubic yards discharged per boring, for a 100-ft deep boring. There will be less than 5.25 cubic yards discharged for the entire drilling program.

22. Surface Area in Acres of Wetlands or Other Waters Filled

No wetland areas or other waters will be filled as part of this drilling activity.

23. Is Any Portion of the Work Already Complete? Yes_____No X_, IF YES, DESCRIBE THE COMPLETED WORK

24. Addresses of Adjoining Property Owners, Lessees, Etc. Whose Property Adjoins the Waterbody

25. List of Other Certifications or Approvals/Denials Received from other Federal, State or Local Agencies for Work Described in This Application.

A Coastal Project Questionnaire and Certification Statement has been filed with the State of Alaska.

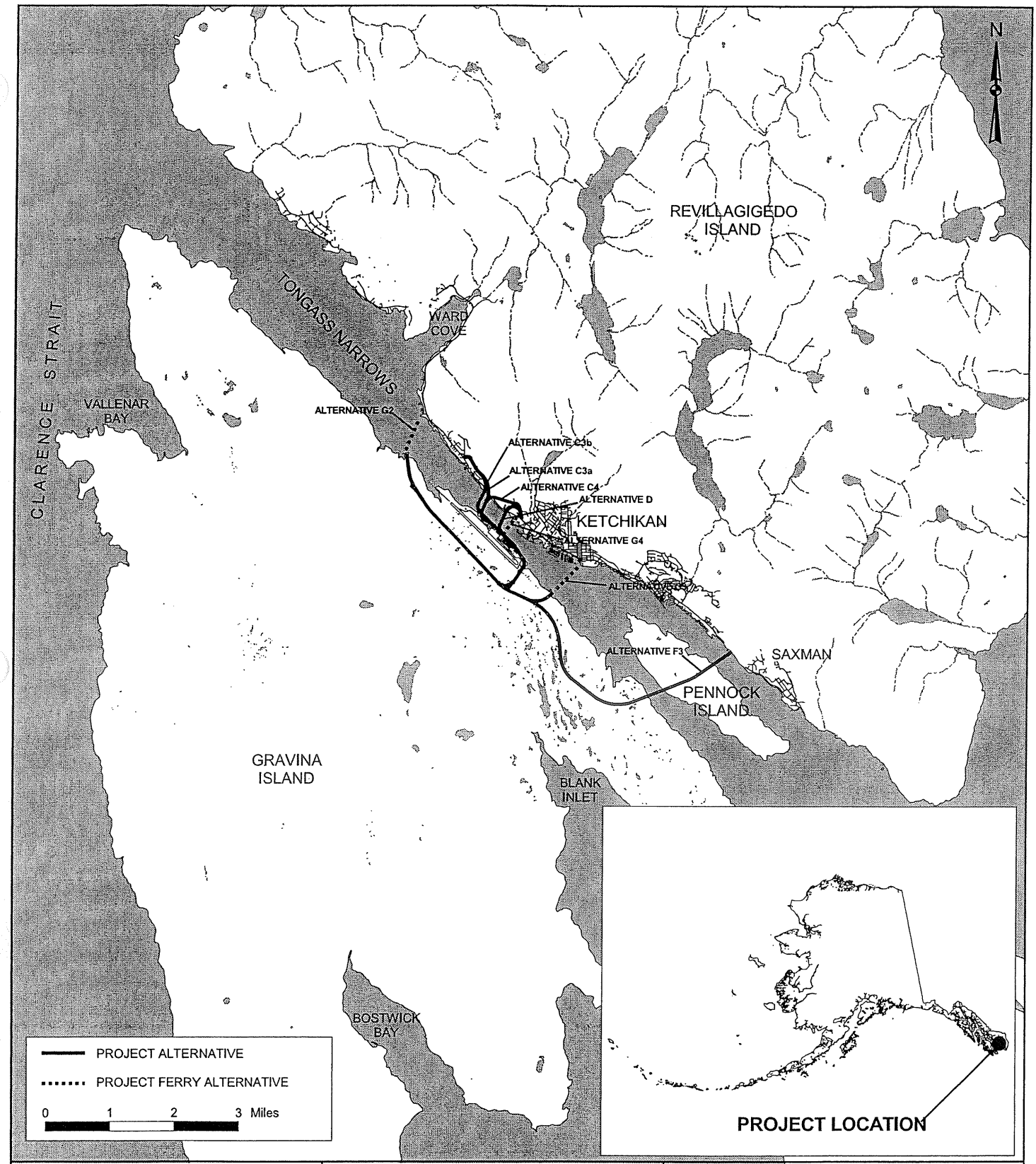
26. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly

authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.



PURPOSE: IMPROVE ACCESS BETWEEN GRAVINA ISLAND AND REVILLAGIGEDO ISLAND

Location: T. 75S, R. 90E,
Section 15, C.R.M.
T. 75S., R 91E,
Sections 31 & 32, C.R.M.

VICINITY MAP

APPLICATION BY:

ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION
6860 GLACIER HIGHWAY
JUNEAU, ALASKA 99801-7999

GRAVINA ACCESS PROJECT

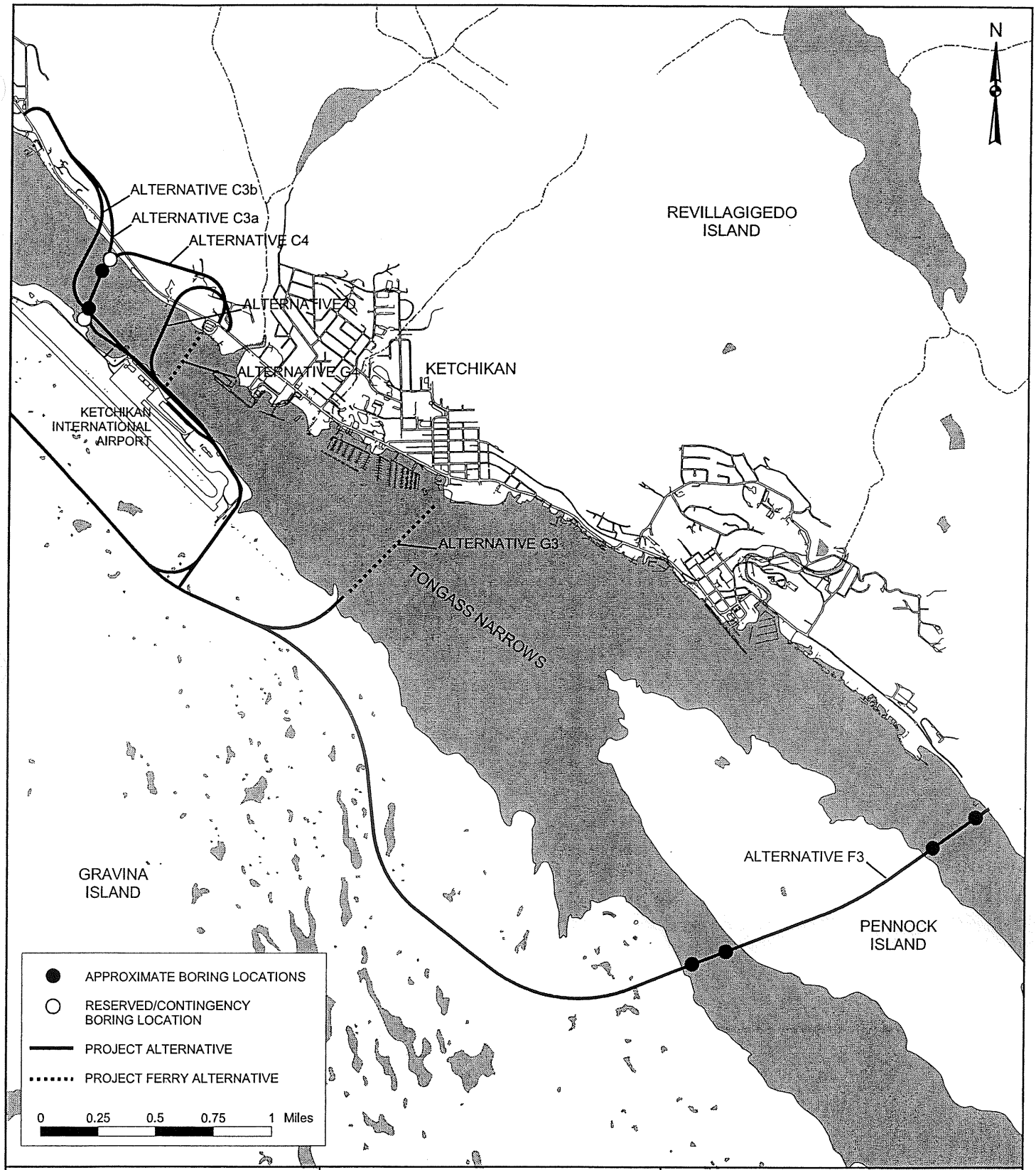
IN: Tongass Narrows

AT: Ketchikan, Alaska

Sheet 1 of 2

Date: April 2002

2002-0152
P45059



PURPOSE: IMPROVE ACCESS BETWEEN GRAVINA ISLAND AND REVILLAGIGEDO ISLAND

Location: T. 75S, R. 90E,
Section 15, C.R.M.
T. 75S., R 91E,
Sections 31 & 32, C.R.M.

PROPOSED BORING LOCATIONS

APPLICATION BY:

ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION
6860 GLACIER HIGHWAY
JUNEAU, ALASKA 99801-7999

GRAVINA ACCESS PROJECT

IN: Tongass Narrows

AT: Ketchikan, Alaska

Sheet 2 of 2

Date: April 2002

2002-0152
096 of 9

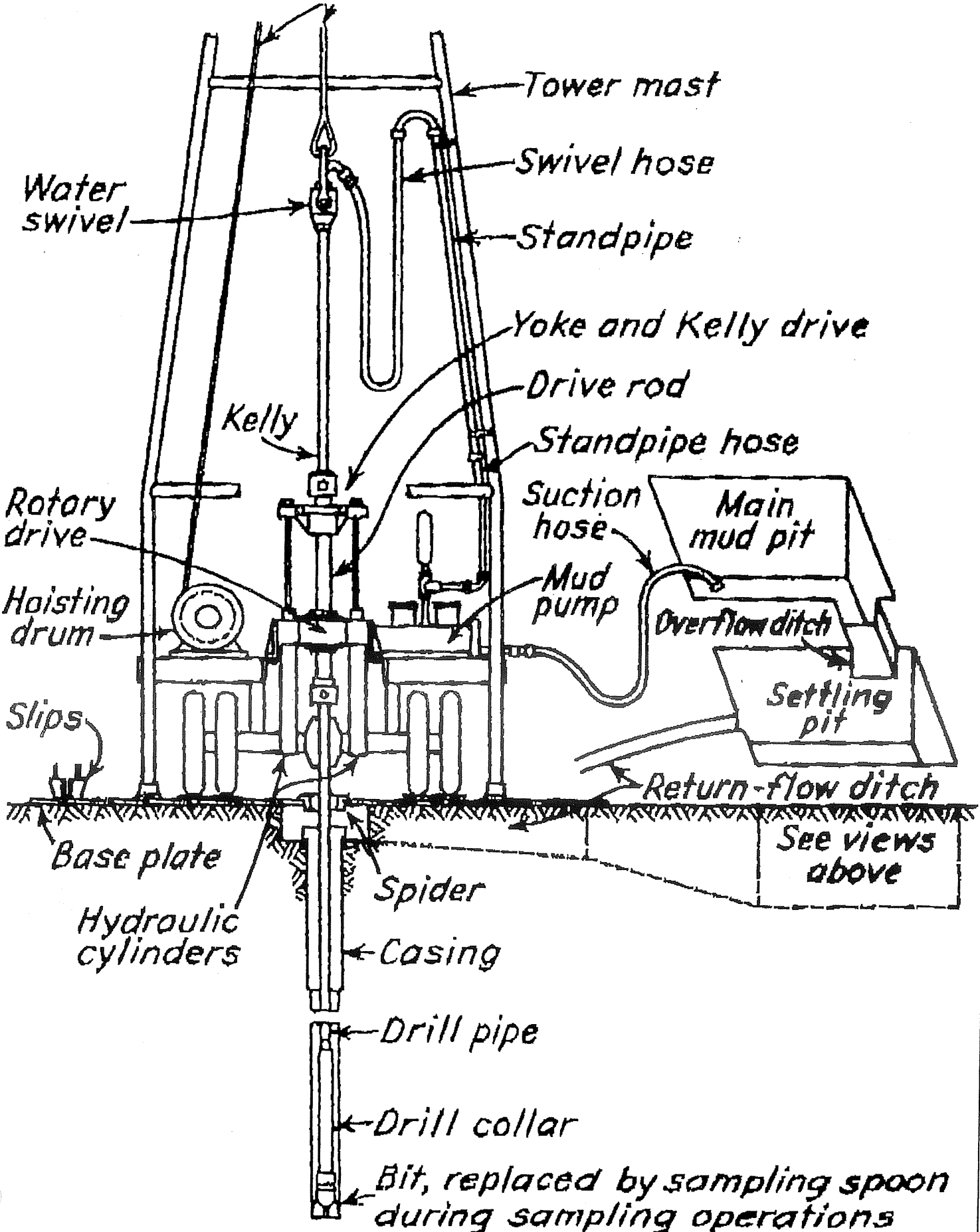
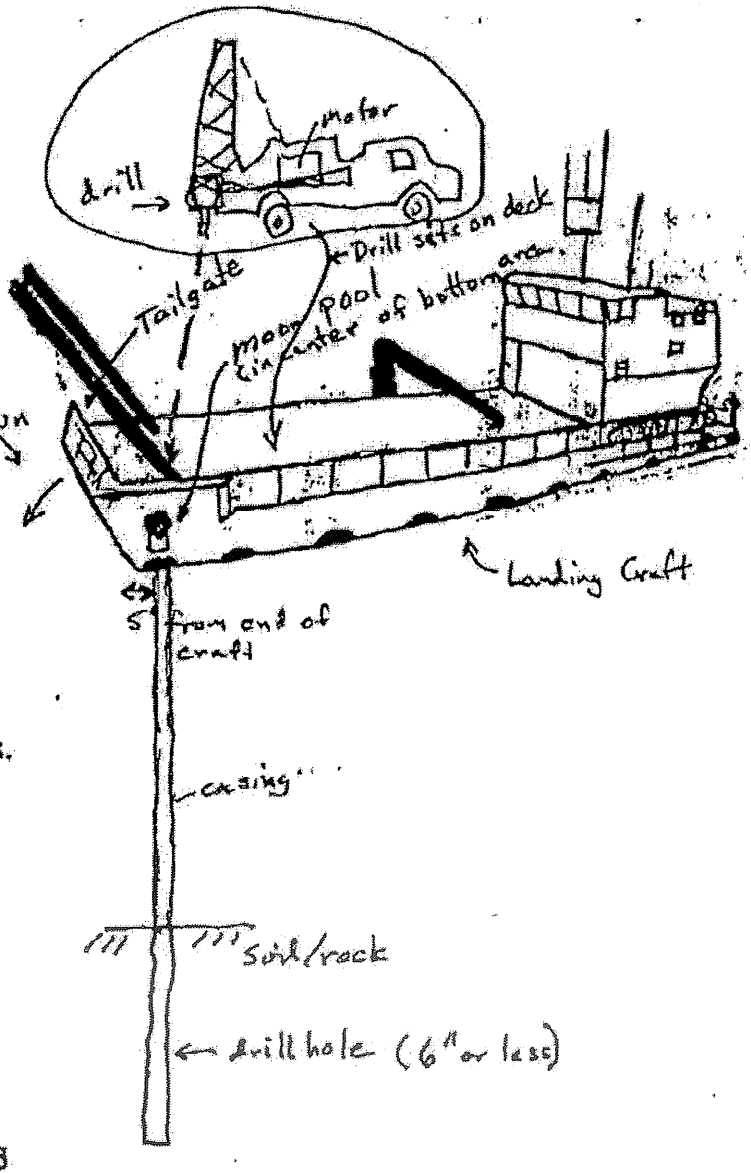


FIGURE 5.4. Rotary drilling rig (after Hvorslev, 1948).

All:_____
From: Glenn Reid
Boat RB

Boat RB statistics:

Boat Length: 20' X 65'
Cargo Bay Capacity: 40' X 15'
Coast Guard Cert. Capacity 50 short tons
Certified to carry: 14 passengers
Sleep facilities: 6 plus crew of 2
Crane capacity: 4 tons
Slinging purposes: 1500 lbs or less
A-frame capacity for anchor handling: 7 tons
20 KW generator: 120-240 Volts 60 Hz.
Computers should be protected with battery packs.



Navagational Aids

2-radars
2-V.H.F radios
1-S.S.B. radio
1-Loran-C
1-Eco Tech Map Machine-Sat-Nav
Raytheon loudhailer model Ray 350
Raytheon spot sounder model F-360 D
Furuno color vidio depth sounder model FMV 603
2-quartz decklights, 1 pointing fwd & 1 pointing aft.

Prices: These may vary depending on the particulars and date of the job.
_____per day for housing unit. Food & cook included
_____per day for general freight hauling & barge work
Mob & Demob_____

If you have any questions please feel free to call or fax me.
Phone #: 907-772-4571
Fax #: 907-772-4490

Information pertaining to your job:

_____

_____

_____

2002-0152
Pg 8 of 9

A removable plug attached to a center rod is used to block the entry of soil into the stem until the desired sampling depth is reached. The plug and center rod are then retracted and the sampler and sampler rod are inserted (Fig. 5.3). In cohesive soils the hollow-stem auger is often used without a plug, since these materials will usually enter the mouth of the lowest auger section only 2 to 4 in. before forming their own plug. The sampler can then be driven or washed through the earth plug into undisturbed material. Augers with inside diameters of $2\frac{1}{2}$ or $3\frac{3}{8}$ in. are most commonly used.

When the hollow-stem auger is used in cohesionless soils below the water table, excess hydrostatic pressures may force water-saturated sand several feet into the stem as the plug is withdrawn. This action loosens the material below the stem and results in too low an indication of its relative density. Special cleanout procedures are also required to wash the material from the stem before sampling can proceed. Therefore, under such conditions the plug should not be used and water should be maintained inside the stem at a level above the ground water table.

If the hollow-stem auger is used in deposits of loose silt or granular material, it may decrease the natural void ratio and increase the confining pressure near the mouth of the lowest auger section. Both processes lead to misconceptions on the unsafe side concerning the compressibility and strength of the material.

Rotary Drilling. Rotary drilling may be used in rock, in clay, or even in sand. It is the most rapid method for penetrating highly resistant materials unless the deposit is very loose or badly fissured. In this method, a rapidly rotating drilling bit cuts or grinds the material at the bottom of the hole into small particles. The particles are removed by circulating water or drilling fluid in a manner similar to that in wash borings. To obtain a sample, the drilling bit is removed and replaced by a sampler (Art. 5.3). A sketch of a rotary drilling rig is shown in Fig. 5.4.

In rotary drilling for site exploration, casing is usually unnecessary except near the ground surface. Collapse of the hole is normally prevented by drilling fluid, which consists of a slurry of clay and water to which bentonite is often added. This slurry, known as *drilling mud*, coats and supports the sides of the drill hole and seals off permeable strata. The diameters of rotary borings for foundation exploration usually range from about 2 to 8 in. Holes of larger diameter suitable for direct inspection of the substrata are discussed in Art. 5.5.

Percussion Drilling. If the drill hole must be advanced through exceptionally hard strata of soil or through rock, auger borings or wash borings cannot be used. One method for drilling holes through such deposits is known as *percussion* or *cable-tool drilling*. In this method a heavy drilling bit is alternately raised and dropped in such a manner that it grinds the underlying material to the consistency of a sand or silt. If possible, the bore hole is kept dry except for a small amount of water that forms a slurry with the material ground up by the bit. When the accumulation of slurry interferes with drilling, the drilling tools are removed from the hole and the slurry cleaned out with a bailer. The hole may be cased if the formation will not stand without collapse. Although percussion drilling is often used for drilling water wells, it is not generally favored for site exploration where intact samples must be obtained for identification and testing.

5.3. Sampling

Types of Samples and Soil Sampling Tools. The kind of samples that should be obtained from an exploratory drill hole depends on the purpose for which the exploration is made. Auger samples may be used to identify soil strata and for some classification tests even though the physical state of the material is completely altered by the sampling process. The cuttings or choppings from wash borings are of small value except for indicating changes in stratification to the boring foreman. The material brought